



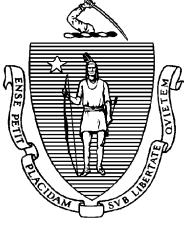
*Executive Office of Environmental Affairs*

# HUDSON RIVER

5-Year Watershed Action Plan

2002-2007





# *The Commonwealth of Massachusetts*

## *Executive Office of Environmental Affairs*

*251 Causeway Street, Suite 900*

*Boston, MA 02114-2119*

Mitt Romney  
GOVERNOR

Kerry Healey  
LIEUTENANT GOVERNOR

Ellen Roy Herzfelder  
SECRETARY

Tel: (617) 626-1000

Fax: (617) 626-1181

or (617) 626-1180

<http://www.state.ma.us/envir>

June 30, 2003

Dear Friends of the Hudson River Watershed:

It is with great pleasure that I present you with the 5-Year Watershed Action Plan for the Hudson River Watershed. The plan will be used to guide local and state environmental efforts within the Hudson River Watershed over the next five years, as well as implement the goals of the Executive Office of Environmental Affairs. These goals include improving water quality; restoring natural flows to rivers; protecting and restoring biodiversity and habitats; improving public access and balanced resource use; improving local capacity; and promoting a shared responsibility for watershed protection and management.

The Hudson River Watershed Action Plan was developed with input from state and federal agencies, Regional Planning Agencies, watershed groups, former watershed team members, and with extensive public involvement throughout the reaches of the watershed. This unique approach helps us focus on the problems and challenges that are identified with stakeholders and community partners in each watershed, rather than being decided solely at the state level. The priority issues and action strategies identified in the plan include:

- Improve Water Quality Throughout Entire Watershed
- Restore and Improve Wildlife Habitat and the Rivers Physical Functions
- Preserve and Augment a Network of Open Space
- Build a Sense of Stewardship and Watershed Literacy throughout the Watershed
- Support Regional and Local Growth Management Initiatives

I commend everyone that was involved in this endeavor. Thank you for your dedication, perseverance, and commitment. If you are not currently a participant, I strongly encourage you to become active in the Hudson River Watershed restoration and protection efforts.

Regards,

A handwritten signature in cursive script that reads "Ellen Roy Herzfelder".

Ellen Roy Herzfelder

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*Any reference to ‘Massachusetts Watershed Initiative (MWI)’ in this document pertains to a program that existed at the Executive Office of Environmental Affairs from 1993-2003. Any reference to a ‘Watershed Team’ refers to a multi-stakeholder team, facilitated by a ‘Watershed Team Leader’ that existed from 1998-2003 as part of the MWI.*

## Chapter 1 - Introduction

The Watershed Action Plan was developed using the goals of the former Massachusetts Watershed Initiative as a framework within which to develop Team goals and objectives. These goals are:

- Healthy Ecosystems and Biological Diversity
- Clean and Plentiful Water for People and Wildlife
- Protected Open Space
- Improve Public Access and Balanced Resource Use
- Shared Responsibility for Watershed Protection and Management

These broad goals are incorporated into watershed-specific goals and priorities, which are described in Chapter 3.

### **The Hudson (Hoosic) Watershed**

The Hudson Watershed of Massachusetts is comprised of three distinct drainage systems, two of which are contiguous land masses in the state, one of which is not. The latter subwatershed, Bash Bish Brook, comprises the southwestern corner of the state and lies wholly in the towns of Mount Washington and Egremont. This westward draining subwatershed of the Hudson is heavily forested, relatively pristine, and geographically remote from the rest of the Hudson Watershed of Massachusetts.

The two contiguous subwatersheds, the Kinderhook Creek and the Hoosic subwatersheds, comprise the northwestern corner of the state. The Kinderhook Creek subwatershed, primarily in the town of Hancock, is on the west slope of the Taconic Range and drains westerly, then south to the Hudson River in New York. This subwatershed is also heavily forested. The significant land uses in this subwatershed are primarily the ski resort industry and agriculture. The former Hudson Watershed Team addressed environmental issues in this subwatershed essentially on a reactive basis, providing comments to proposed projects through the MEPA process and supporting agricultural agencies as the need arises.

The Hoosic River subwatershed, referred to hereafter as the Hoosic watershed, forms the northern spine of the richly forested Berkshire Mountains and includes Mount Greylock, the highest point in the state. The region is underlain by a thick layer of limestone rock, which buffers the effects of acid precipitation and produces soils colonized by a variety of rare lime-loving plant species. This unique environment has produced some of the state's greatest variety of plant life and protected many rare species that cannot flourish without these exceptional alkaline conditions, including swamps that date back thousands of years. These open wetlands in low-lying areas support a diverse group of plants dominated by lime-loving grasses and broad-leaved herbs.

In addition to its distinctive natural resources, the Hoosic River also has a long history as a resource for human use. The Hoosic River has historically served as the source of power for dozens of mills in northern Berkshire County and as a water source for industrial production.



Intense development took place along the river corridor, particularly in Adams and North Adams. Catastrophic floods led to the construction of cement flood-control chutes in both municipalities. Part of the river's industrial legacy has been polychlorinated biphenyl (PCB) contamination that has caused swimming and fishing advisories. However, significant remediation efforts are underway, and combined with the fast-moving nature of the river, there is hope that the advisory will be lifted in the near future. Furthermore, urban and agricultural runoff continues to pose a threat to sustained water quality improvements.

The Hudson River Watershed and the Housatonic River Watershed face similar issues and both fall within the boundaries of Berkshire County. Both watersheds (as well as parts of the Farmington, Westfield, and Deerfield River Watersheds) share the services of a regional planning agency, the Berkshire Regional Planning Commission (BRPC), along with the traditional management services and responsibilities of the other government agencies.

Additionally, there are numerous non-governmental regional or state organizations that are in the land preservation and/or conservation business. Those with regional interests include:

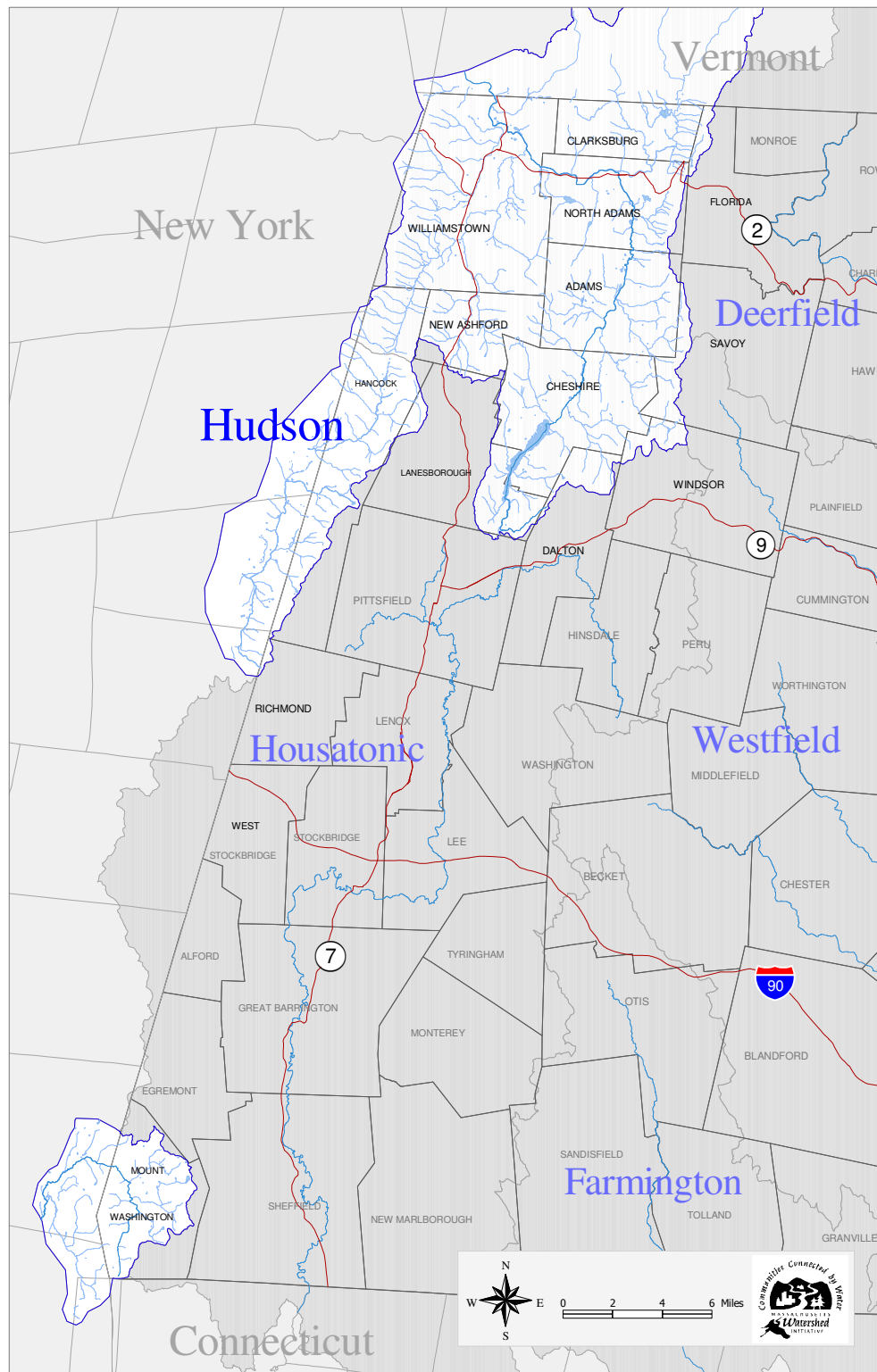
- The Massachusetts Audubon Society (MAS), Berkshire Sanctuaries
- The Trustees of Reservations (TTOR), Western District
- The Berkshire Natural Resources Council (BNRC)
- The Williamstown Rural Lands Foundation (WRLF)
- Trout Unlimited
- The Berkshire County League of Sportsmen
- The Sierra Club

### **Recent Accomplishments in the Watershed**

The former Watershed Team has played a significant role in the past few years in increasing communication and coordination between former Team members and partners. Through the Team's communication channels, the skills and efforts of different partners have resulted in greater collective accomplishments that benefit the entire watershed.

The accomplishments of the former Watershed Team and its members and partners in the past few years include:

- Two watershed forums conducted by the previous Watershed Team leader pursuant to nonpoint source assessment project (1997,1998-Watershed Team).
- Business outreach forum (1998-HOORWA, CET).
- Watershed Initiative brochure (1998-DEM, OWR).
- Agricultural outreach workshop (1999-HOORWA, DFA).
- Four watershed newsletters to the watershed community (1997-1998-BCD, BRPC).
- State of the River conferences (1998,1999-HOORWA).
- Annual Riverfest celebrations (HOORWA).
- Interactive Student Teleconference (1998-HOORWA, CET).
- Lakes and Ponds Symposium (1999-LAPA West, DEM, BRPC).



- South Branch Coordinator outreach efforts (ongoing-HOORWA, CET, Town of Adams).
- Three day exhibit at Adams Agricultural Fair (1999-HOORWA).
- Three Hoosic subwatersheds outreach forums for development of 5-Year Action Plan (1999-2000) in Adams, North Adams, and Clarksburg.
- Monthly Watershed Team meetings publicized in weekly and daily newspapers (1998-2003).
- Two annual collections of water quality data (1997,1998 -DEP,HOORWA).
- Caddis Fly Larvae collection and sediment sampling for PCB analysis (1998-EPA, former Watershed Team).
- Thermal data collection on South Branch (ongoing-HOORWA).
- Two Shoreline Surveys (HOORWA, DFWELE Riverways Program).
- Wild Trout Stream Identification Project (TU, DFWELE).
- Caddis fly larvae collected for toxics monitoring (former Watershed Team, EPA).
- Historic Mill re-use study (HOORWA).
- Nonpoint Source Pollution Assessment Project (BRPC).
- A stormwater assessment project underway [BRPC, Mass. Highway Department (MHD), former Watershed Team).
- Department of Environmental Protection (WERO and DWM) Water Quality Assessment.
- Establishment of the South Branch Watershed Ecosystem Partnership (EPA, former Watershed Team, Town of Adams, Specialty Minerals, Inc.).
- Establishment of the Mohican/Mohawk Trail (HOORWA, Deerfield River Watershed Association).
- Non point source pollution education for municipal officials (BRPC, HOORWA, former Watershed Team).
- Former watershed Team member support of Cheshire Lake management strategies (HOORWA).
- Development of a Preliminary Restoration Plan (PRP) by the ACOE, NY District for habitat restoration in 2.3 miles of flood control chutes in Adams (ACOE, EPA, and former Watershed Team).

## Chapter 2 – Action Plan

### The 5-Year Action Planning Process

EOEA utilizes a 5-Year planning cycle. The planning activities and their corresponding calendar years are as follows:

- Year 1- Outreach
- Year 2- Data Collection (Research and Monitoring)
- Year 3- Data Assessment
- Year 4- Action Plan Development
- Year 5- Plan Implementation and Evaluation

The 5-Year planning cycle is modeled after the Massachusetts Department of Environmental Protection's water quality analysis (WQA) and 305B reporting requirements to the Environmental Protection Agency (EPA). This Five Year Watershed Action Plan (WAP) represents a broader approach to watershed management. As part of the five-year cycle, this WAP is the product of an extensive planning process and the start of an ambitious implementation phase. The process utilized by the former Team incorporated as much input as possible from the various members of the watershed Team and from stakeholders throughout the watershed.

Background assessment information was drawn from the former Watershed Team's 2000, 2001, 2002, and 2003 Annual Work Plans, the Berkshire Regional Planning Commission's *Stormwater Assessment in the Hoosic and Housatonic Watershed (2000)* and *The Regional Plan for the Berkshires (1999)*, the Department of Environmental Protection's *Nonpoint Source Management Plan (2001)*, and the *Assessment of Land Use Activities and Nonpoint Source Pollution in the Hoosic River Watershed (1998)* prepared by the Berkshire Regional Planning Commission and the Berkshire Conservation District.

It was primarily through the three subwatershed forums (Adams, North Adams, and Clarksburg) conducted in 1999-2000, that the 5-Year Watershed Action Plan was introduced to the general public, municipal officials in particular. These forums provided the former Watershed Team anecdotal information about historical developments in the watershed and the perceived condition of the watershed today. More importantly, these forums provided an opportunity for local people to speak about what is most important to them. These concerns almost entirely revolved around environmental issues as they relate to local quality of life.

The 5-Year Plan was further refined as the work of the former Watershed Team progressed and working groups began to coalesce around specific environmental problem areas. The Plan then became not an "end all" to all local environmental issues, but more realistically a pragmatic list of those environmental problems that needed fixing *that also* had buy-in at the local level.

## Chapter 3 - Goals and Objectives

The Hoosic Watershed Action Plan was developed using the goals of the former Massachusetts Watershed Initiative (MWI) as a framework within which to develop Team goals and objectives.

The former Hoosic Watershed Team further refined these goals to more specifically address the needs of this watershed. This chapter describes these goals and objectives in greater detail. They are:

1. Improve Water Quality Throughout Entire Watershed
2. Restore and Improve Wildlife Habitat and the Rivers Physical Functions
3. Preserve and Augment a Network of Open Space
4. Build a Sense of Stewardship and Watershed Literacy throughout the Watershed
5. Support Regional and Local Growth Management Initiatives

### **Goal #1 Improve Water Quality Throughout Entire Watershed**

*Objective 1.1 Identify, Assess, and quantify point and nonpoint source pollution in the headwaters region of the South Branch of the Hoosic River.*

*Objective 1.2 Craft a mitigation strategy and site-specific plans to mitigate pollution sources in the headwaters of the South Branch.*

*Objective 1.3 Implement a wetlands assessment in the headwaters of the South Branch of the Hoosic River with the intent of restoring wetland hydrology functions.*

The headwaters region of the South Branch of the Hoosic River is defined by EOEA as the watershed of Cheshire Reservoir (also known as Cheshire Lake and Hoosac Lake), downstream to the Dam at the Harbor Road, just south of the Cheshire Adams Town Line. Work needs to be carried out with trained volunteers to conduct a shoreline, tributary, and watershed survey resulting in a Scope of Work for a subwatershed management plan. The management plan will include: a continuous whole lake monitoring program, a maintenance management plan for the public infrastructure and facilities adjacent to the Reservoir, investigate and quantify point and non-point source pollution, assess wetland function and restoration, and produce a water quantity analysis and dam operation guidance and maintenance plan.

The long-term success of the management of Cheshire Reservoir is contingent primarily upon the adequacy of those resources that get applied by the managing entity. The State Division of Capital Assets Management (DCAM) currently has “care and control” of this lake, having assumed “ownership” upon the dissolution of Berkshire County government (June 30, 2000).

*Objective 1.4 Support and participate in the LAPA West lake monitoring and stewardship project and Annual Water Resources Symposium.*

The Lake and Pond Association of Western Massachusetts, LAPA-West, is working to preserve, protect, maintain and enhance the environmental, aesthetic, recreational and economic values of the lakes and ponds within Western Massachusetts. In existence over two years, LAPA-West has strongly emphasized water quality monitoring and has developed an initial lake and pond monitoring program. Previously, LAPA-West conducted five water quality monitoring workshops, gathered water quality data, drafted Standard Operating Procedures for water sampling and, with EOE grant funds, purchased water quality monitoring equipment for shared use by its members.

*Objective 1.5 Conduct a watershed water quality assessment and develop a water quality improvement plan for the Mausert's Pond subwatershed.*

Located in Clarksburg State Park, Mausert's Pond is a popular destination for swimming, fishing and non-motorized boating. As the only state-owned public swimming area in the Hudson Watershed, the Pond is managed by the Department of Environmental Management (DEM) and supports a broad range of fish species. However, Mausert's Pond has had recurring clarity, nutrient, invasive plant and leech problems that the DEM has addressed through aquatic herbicide treatments, dam repairs, and goose harassment. High bacteria counts have resulted in beach closures, as well as loss of human contact and recreational uses of the Pond. Furthermore, there are no consistent, comparable and quality-assured data sets reflecting the water quality issues contained in Mausert's Pond.

Public meetings have been held with the citizens of Clarksburg to obtain feedback and a list of desired actions. Fish decline, and the siltation of swimming holes and dams were the major concerns at the meetings. There is currently a water quality assessment underway, and a management plan will be created when the assessment is complete.

*Objective 1.6 Attain fishable / swimmable water quality status in the Massachusetts portion of the Hoosic River by continuing to prioritize, assess, and work to improve impaired water bodies identified on the DEP 303d list or through other creditable sources.*

*Objective 1.7 Implement stormwater mitigation projects throughout watershed, with a particular emphasis on collaboration with municipalities and businesses.*

## **Goal#2 Restore and Improve Wildlife Habitat and the Rivers Physical Functions**

*Objective 2.1 Fully assess the alternatives of restoring the natural river functions (geomorphology) in the South Branch of the Hoosic River in the Town of Adams, while maintaining adequate flood storage and discharge capacity to protect and ensure public safety and property.*

*Objective 2.2 Implement the most viable restoration alternative(s) to maximize achievement of all the restoration objectives, including habitat improvement, mitigating thermal degradation, and improving visual and physical access to the riparian corridor.*

A 2.2 mile section of the Hoosic River in Adams was channelized in the 1950's to control flooding in the community. Unfortunately, this channelization and hardening of the streambed and banks negatively impacted the instream habitat and temperature flow of the river. As a result, this 2.2-mile reach tends to superheat during corresponding periods of low flow and high ambient temperature.

The S.1135 Program was established to authorize the Army Corps of Engineers to review COE projects and restore the habitats that were impacted by previous work. Through the S.1135 Program (75% federally funded), the NY COE has partnered with local stakeholders who are advocating for restoration of the Hoosic River.

Specialty Minerals, Inc. (SMI) quarries limestone from the terraces adjacent to the Hoosic River and discharges to the river about 4 million gallons per day of heated process water. The water, although essentially clean, has two primary impacts to the habitat. On the one hand, the discharge (having been withdrawn from confined aquifers) augments the volume and flow of the river. On the other hand, the resulting thermal degradation stresses the ecosystem, particularly during low flow/high ambient temperature periods. Although the river is technically classified as a warm water fishery, it supports wild trout throughout the unaltered reaches of the river system. The presence of wild trout is a water and habitat quality indicator as well as being highly prized by sportsmen. Therefore, there are both environmental and economic benefits to restoring and maintaining such a high-quality aquatic habitat.

Through instream temperature monitoring done by both SMI and volunteers from the local watershed association, it was determined that the thermal impacts to the river were greater from the concrete flood control channel than from the company's direct discharge. As part of its watershed approach to permitting, EPA encouraged SMI to support the mitigation of thermal pollution and subsequent habitat restoration in the concrete channel as a trade-off for having to otherwise actively cool their process water prior to discharge. As a result of this negotiation, the Hoosic River South Branch Ecosystem Partnership was formed. This Partnership, made up of representatives from the Town of Adams, Specialty Minerals, the EPA, the NY ACOE, the Hoosic River Watershed Association (HooRWA), regional and state agencies, and private conservation organizations (Trout Unlimited), is convened through the former Hoosic Watershed Team and facilitated by the former Watershed Team Leader.

The South Branch Partnership is now teamed with the NY COE technical and planning staff and is entering the second phase of implementing the S.1135 Program toward the eventual goal of habitat restoration.

The Hoosic River project will rectify a long-standing impact from a Corps flood control project on a potentially highly productive wild trout fishery. It will directly return a major portion of lost ecological values to a section of modified channel, and indirectly improve an even larger stretch of river. Furthermore, techniques used in the project will prove invaluable to better planning and design of future flood control projects by Federal, state, and local governments.

*Objective 2.3 Assess and mitigate sedimentation and water quality issues of the North Branch of the Hoosic River as identified in the DEP's 303d list.*

The North Branch of the Hoosic River is listed on the State's 303d list of impaired water bodies due to the presence of pathogens and siltation.

*Objective 2.4 Investigate possible dam removal projects on all river segments for the purposes of restoring natural river functions (geomorphology) to the extent practicable*

*Objective 2.5 Research status of stressed habitats from reduced flows related to surface water supplies and water withdrawals.*

*Objective 2.6 Initiate and support enhancement opportunities for wildlife, wetlands, and biodiversity.*

*Objective 2.7 Develop a fisheries management plan for the Hoosic River for the purposes of improving both sport fishing and fish consumption opportunities.*

The Western Wildlife District (WWD) of the Department of Fish and Wildlife and Environmental Law Enforcement (DFWELE) has conducted fish surveys in the past at 20 sites in the Hudson watershed annually. Historically the extent of these fish surveys and assessments were limited by a lack of equipment. In recent years, the Western Wildlife District (WWD) of DFWELE has begun coordinating its fish population surveys with the water quality monitoring efforts of both the DEP Water Quality Monitors and the Volunteer Monitors in the Hudson Watershed.

This survey and assessment work was being supported by the former watershed teams through the purchase of additional specialized equipment for use by the WWD. With the new equipment 5-10 sites will be added to the originally proposed list of 20, including ponds and larger rivers. From these surveys fish populations will be assessed at each site and in the drainage as a whole. The future intent is to use this new data to help identify problems and issues throughout the drainage, monitor change in previously well surveyed segments and establish a baseline for future work in newly assessed portions.



### **Goal #3 Preserve and Augment a Network of Open Space**

*Objective 3.1 Support the development of a recreational railtrail/bikeway throughout the Hoosic Watershed.*

*Objective 3.2 Explore the creation and/or improvement of open space and appropriate recreational trail links between adjacent municipalities and the Mount Greylock Reservation.*

*Objective 3.3 Implement National Park Service study ("Rivers and Trails Conservation Assistance Program") in Adams.*

*Objective 3.4 Support open space plan development on a municipal as well as watershed level.*

## **Goal #4 Build a Sense of Stewardship and Watershed Literacy throughout the Watershed**

### *Objective 4.1 Work regionally to develop environmental educators' network*

The former Watershed Team and former Watershed Team leader were very involved in environmental education outreach in the past. There is a need to build on this foundation.

### *Objective 4.2 Implement a community-wide information and outreach program for the thermal mitigation/river restoration project in Adams.*

Through the Section 1135 Program, the NY ACOE is proposing to restore habitat within an existing concrete channel that serves as a flood control measure in the town of Adams. The Section 1135 Program does not, however, include an early outreach component, although all involved parties agree that local acceptance of the project is critical to its implementation. Due to tragic historical flooding events, the community has deep-seeded reservations regarding any changes to the present system of flood control. Therefore, preliminary outreach efforts will be required before the project commencement in 2004 to allay fears and educate citizens about the river restoration opportunities included in this project.

### *Objective 4.3 Provide technical assistance through the continued implementation of Nonpoint Source Pollution Education for Municipal Officials (NEMO) to specialized decision-making groups in the watershed.*

Nonpoint source pollution is one of the most pressing water quality issues in Massachusetts. Land-based sources of nonpoint source pollution impact water quality through runoff. The land use impacts on water quality are generally unfamiliar to local officials or, where they are known, not given much attention or prominence. Specifically, there is a strong link between impervious surfaces and water quality. These surfaces allow atmospheric and land-based pollutants to accumulate only to be washed to the closest stream or pond during the "first flush" of a rainstorm ("first flush" refers to the first 0.25"-1" of rainfall). Increased awareness of the ramifications of increased impervious surface and concurrent decrease of natural areas will ultimately lead to modifications of land use regulations and development practices and ultimately to improved water quality.

Building on a successful program from the University of Connecticut's Cooperative Extension Service, NEMO is an educational program that seeks to increase local environmental knowledge and the capacity of municipal officials to address the pervasive water quality problem of nonpoint source pollution. By working with the decision-makers in a community, this project has the rare opportunity to impact long-term decision making and environmental goal setting. As an educational program, this project will build the capacity of town officials and help them make decisions that mitigate the environmental impact of municipal planning and development. NEMO aims to lay the foundation for long-term sustainable improvements in water quality.

The overall goals of NEMO are to raise awareness of the land use impacts on water quality, especially those impacts that result from municipal decisions over land use within their town.

NEMO identifies the link between growth/development and water quality/quality of life issues. NEMO is designed to be an educational and technical assistance program that continues to function far after the initial investment.

*Objective 4.4 Support a sustainable water quality volunteer monitoring program through the creation of stream teams and lake survey teams.*

Due to staff and budget shortages, volunteer monitoring programs will continue to be a valuable supplemental source of water quality data and information. However, training and outreach efforts are necessary to recruit stream monitors and to ensure consistency and accuracy in the data collected. The data collected by such groups will serve as the basis for mitigation strategies to be developed for specific impaired segments and/or water bodies.

*Objective 4.5 Foster regular long-term public awareness, education, and stewardship about watershed issues, challenges, and successes*

## **Goal #5 Support Regional and Local Growth Management Initiatives**

*Objective 5.1 Support the development of the Community Development Plans through Executive Order 418 and the adoption of the Community Preservation Act.*

Community Preservation is an organizing principle focused on preserving and enhancing the quality of life in Massachusetts community by community, watershed by watershed. The Community Preservation Initiative provides tools to local decision-makers to help them make informed decisions about future growth. Among other objectives, Community Preservation addresses land and watershed protection, affordable housing, historic preservation, economic development, and transportation. Community Preservation seeks to balance these interests and to encourage communities to preserve their unique characteristics and quality of life as they continue to develop.

Through the Community Preservation Initiative, the Executive Office of Environmental Affairs (EOEA) is providing communities with a set of three integrated tools to plan for their future: buildout maps and analyses, professional planning assistance to complete and implement Community Development Plans, and information about the Community Preservation Act.

*Objective 5.2 Advocate for watershed-based planning in the management of municipal environmental systems.*

*Objective 5.3 Support the implementation of brownfields and other redevelopment projects, maximizing opportunities for “regreening” and more environmentally sound reuse.*

*Objective 5.4 Support efforts to enhance and strengthen the local economic base through sustainable production of value-added products.*

Approximately 85-90% of the western Massachusetts watershed land base is forested, over 80% of which are owned by non-industrial forest landowners including many families. The health and future wellbeing of the watersheds will be determined in a large part by the management of these private forests. The Massachusetts Forest Stewardship Program is a collection of officials from MA DEM, UMass, and the MA Forest Stewardship Program that has organized the Massachusetts Woodlands Cooperative (MWC). The cooperative’s mission is to maintain the environment and character of western Massachusetts through the protection, enhancement and careful economic development of one of the region’s most plentiful resources. MWC also seeks to protect wetlands, enhance wildlife habitat, reverse the practice of high grading timber, invigorate the local economy and provide educational programs for its members and the general public.

*Objective 5.5 Support efforts to enhance the capacity of local Boards and Commissions.*

## Chapter 4 – Action Strategies

In most cases specific actions are being taken, or are identified to be taken, which will accomplish the teams objectives and their goals. However, identifying actions in a 5-Year context was a challenge in light of rapid change within State government, as within the watershed. Availability of resources, responsiveness of project partners, bureaucracy beyond EOEAs control, and new information has continually forced readjusting of assumptions, approach and expectations to these dynamic circumstances. This Chapter is an effort to capture the current and proposed actions as accurately as they could be determined at the time they were formulated.

### **Goal #1 Improve Water Quality Throughout Entire Watershed**

*Objective 1.3 Implement a wetlands assessment in the headwaters of the South Branch of the Hoosic River with the intent of restoring wetland hydrology functions.*

#### **Actions:**

- 1.1.1 Update the Lake Management Plan for the North Basin.
- 1.1.2 Create Lake Management Plans for the other areas of the lake.
- 1.1.3 Evaluate the capacity and suitability of culverts between basins.
- 1.1.4 Measure and evaluate the degree of erosion and pollution from tributaries in all three basins.
- 1.1.5 Evaluate the type and effects of the vegetation in the mid and lower basins with special attention paid to control of invasive species.
- 1.1.6 Collect additional information with regards to control of Eurasian water milfoil.
  - Identify the source of chloride to determine the significance of septic seepage
  - Determine the sources and sinks of phosphorous present, including both surface and groundwater
- 1.1.7 Study the effects of herbicide treatment on habitat.
- 1.1.8 Evaluate the condition of the Cheshire Reservoir Dam. Attention should also be directed to issues of water volume below the dam, especially as it relates to reports of flooding.
- 1.1.9 Examine the effects of the Ashuwillticook Trail on lake management.
- 1.1.10 Augment the Adams flood control efforts to incorporate trout habitat and include an assessment of a vegetated buffer on the riverbank from Adams to the Headwaters.
- 1.1.11 Monitor Cheshire Lake water quality and identify remaining point sources of pollutants.

*Objective 1.4 Support and participate in the LAPA West lake monitoring and stewardship project and Annual Water Resources Symposium.*

#### **Actions**

- 1.4.1 Provide direct assistance to volunteer monitors to develop lake-specific water quality monitoring programs
- 1.4.2 Provide training to regional water quality monitoring groups; assist local groups in conducting monitoring
- 1.4.3 Expand an existing program for shared use of water quality monitoring equipment

- 1.4.4 Develop a comprehensive method to compile and disseminate water quality monitoring data.

*Objective 1.5 Conduct a watershed water quality assessment and develop a water quality improvement plan for the Mausert's Pond subwatershed*

**Actions**

- 1.5.1 Collect and review the existing water quality data record.
- 1.5.2 Develop a lake and watershed study design and a Quality Assurance Program Plan.
- 1.5.3 Implement a monitoring program on select tributary and in-lake locations.
- 1.5.4 Organize, train, and utilize a Volunteer Survey Team and conduct a shoreline, tributary, and watershed survey to identify sources and causes of pollutant loadings.
- 1.5.5 Prepare a report of findings and recommendations.
- 1.5.6 Prepare a basic management plan to identify, maintain, and monitor achievable water quality.

*Objective 1.6 Attain fishable / swimmable water quality status in the Massachusetts portion of the Hoosic River by continuing to prioritize, assess, and work to improve impaired water bodies identified on the DEP 303d list or through other creditable sources.*

**Actions**

- 1.6.1 Continue to develop Quality Assurance Project Plans (QAPP) for all anticipated water quality data collection and monitoring.
- 1.6.2 Continue the development the long-term sustainability of volunteer monitoring in the watershed.
- 1.6.3 Develop a local working relationship with "mandatory" (government-regulated) water quality data gatherers for the purposes of comparing and supporting data collection efforts.
- 1.6.4 Support the coordination of the water quality studies produced by the DEM, the Department of Public Health, and the Department of Fish and Wildlife.
- 1.6.5 Establish continuous "local" laboratory resources for water quality sample analysis.

*Objective 1.7 Implement stormwater mitigation projects throughout watershed, with a particular emphasis on collaboration with municipalities and businesses.*

**Actions**

- 1.7.1 Implement EPA Phase II Stormwater Regulations as applicable.
- 1.7.2 Conduct specific, place-based stormwater assessment toward the development of mitigation project design and implementation.
- 1.7.3 Implement the recommendations contained in the Stormwater Assessment of the Hoosic and Housatonic Watersheds prepared by the Berkshire Regional Planning Commission.

## **Goal#2 Restore and Improve Wildlife Habitat and the Rivers Physical Functions**

*Objective 2.2 Implement the most viable restoration alternative(s) to maximize achievement of all the restoration objectives, including habitat improvement, mitigating thermal degradation, and improving visual and physical access to the riparian corridor.*

### **Actions**

- 2.1.1 Assist the New York Army Corps of Engineers' exploration of alternative bioengineering modifications or the creation of an additional channel.
- 2.1.2 Support and assist in the formation of the Preliminary Management Plan (PMP) and the Environmental Restoration Report and the development of study designs through funding and in-kind support.
- 2.1.3 Conduct preliminary public outreach to allay community hesitations and fears regarding the alteration of flood control measures and enhance support for the project.
- 2.1.4 Implement a hydrological study of the flows in the headwaters region of the South Branch of the Hoosic River.

*Objective 2.7 Develop a fisheries management plan for the Hoosic River for the purposes of improving both sport fishing and fish consumption opportunities.*

### **Actions**

- 2.7.1 Coordinate fish population surveys with the DEP Water Quality Monitors and Volunteer Monitors in the Hudson Watershed.
- 2.7.2 Continue fish population surveys of approximately twenty sites on rivers, streams and ponds throughout the watershed.
- 2.7.3 Expand survey areas from previous years to include at least five additional ponds and larger river segments.
- 2.7.4 Purchase specialized equipment to increase surveying ability of the WWD of the DFWELE within the watershed
- 2.7.5 Further process new and cataloged data for dissemination at watershed conferences and to the general public.

## **Goal #3 Preserve and Augment a Network of Open Space**

*Objective 3.1 Support the development of a recreational railtrail / bikeway throughout the Hoosic Watershed.*

### **Actions**

- 3.1.1 Support the development of a 10.5 mile Ashuwillticook Rail Trail. The project calls for site preparation for the entire 10.5 miles of the trail, along an abandoned railroad right-of-way, along with paving the southern half of the bike path from the Pittsfield/Lanesborough line to Cheshire.

## **Goal #4 Build a Sense of Stewardship and Watershed Literacy throughout the Watershed**

### *Objective 4.1 Work regionally to develop environmental educators' network*

The former watershed team and the Watershed Team leader were very involved in environmental education outreach in the past. To build on this foundation, the following efforts are planned:

#### **Actions**

- 4.1.1 Promote and support applications by teachers for EOEa Outdoor Education Classroom Grants
- 4.1.2 Work with non-profit groups like Massachusetts Audubon Society, the Nature Conservancy, and the Massachusetts chapter of the Appalachian Trail Conference to seek funding to establish an environmental education curriculum to be distributed to the all the elementary schools in the region.
- 4.1.3 Establish connections with local secondary schools and colleges to serve as support in service-learning projects such as watershed clean-up days, stream-team organization.

### *Objective 4.2 Implement a community-wide information and outreach program for the thermal mitigation/river restoration project in Adams.*

#### **Actions**

- 4.2.1 Develop a 10-minute PowerPoint slide show and presentation and make available to community groups.
- 4.2.2 Develop an informal brochure describing the techniques and the consequences of each action and distribute to local organizations.
- 4.2.3 Incorporate river ecology and restoration efforts into elementary environmental education curriculum.

### *Objective 4.3 Provide technical assistance through the continued implementation of Nonpoint Source Pollution Education for Municipal Officials (NEMO) to specialized decision-making groups in the watershed.*

#### **Actions**

- 4.3.1 Develop high quality computer-generated slide and GIS presentations and fact sheets aimed at municipal officials and local decision makers
- 4.3.2 Conduct at least one outreach meeting per community to encourage long-term decision making and environmental goal setting
- 4.3.3 Deliver follow-up presentations, tailored to the specific needs of individual communities, to at least two communities, not to exceed 5 additional presentations.
- 4.3.4 Assist each community in determining the options that best facilitate improving water quality. This may include GIS services, review of current by-laws, review of land-use practices in the municipality, and recommendations for stormwater best management practices.
- 4.3.5 Direct technical assistance to individual municipal boards to implement planning tools compatible with the options available
- 4.3.6 Develop and apply municipal environmental evaluations. This may include number of boards receiving and responding to NEMO presentations, and an assessment of actions



- taken in response to the presentations; adoption of planning tools or strategies by contacted municipalities.
- 4.3.7 Build the capacity of town officials and help them make decisions that mitigate the environmental impact of municipal planning and development.
  - 4.3.8 Engage local colleges and environmental interests in concert with NEMO objectives.

*Objective 4.4 Support a sustainable water quality volunteer monitoring program through the creation of stream teams and lake survey teams.*

**Actions**

- 4.4.1 Develop and implement a plan for appropriate watershed and water resources roadside and trailside signage.
- 4.4.2 Expanding on the 2002 DEP and Volunteer data collection, train volunteer monitors and target hot spots and areas of data gaps following the Quality Assurance Project Plan and Standard Operating Procedures.
- 4.4.3 Secure a local laboratory to enable volunteer groups to conduct water quality testing. Contact Williams College and MCLA and local high schools to explore partnership opportunities.
- 4.4.4 Explore funding sources such as the Riverways Adopt-a-Stream Small Grants, NOAA Community-Based Restoration Grants, and the Massachusetts Environmental Trust.

**Goal #5 Support Regional and Local Growth Management Initiatives**

*Objective 5.1 Support the development of the Community Development Plans through Executive Order 418 and the adoption of the Community Preservation Act.*

**Actions**

- 5.1.1 Offer support, information, and presentation assistance with communities beginning the process of adopting the Community Preservation Act.
- 5.1.2 Support Regional efforts to implement shared Conservation Agents to serve groups of municipalities in the implementation of the Wetlands Protection Act.

*Objective 5.3 Support the implementation of brownfields and other redevelopment projects, maximizing opportunities for “regreening” and more environmentally sound reuse.*

**Actions**

- 5.3.1 Support the initiatives of the Center for Ecological Technology’s mission and activities in providing information and services in composting, solid waste, sustainable agriculture, economic development, indoor air quality, energy and resource conservation and renewable resources.
- 5.3.2 Support Regional and Municipal redevelopment and/or brownfields initiatives.

*Objective 5.4 Support efforts to enhance and strengthen the local economic base through sustainable production of value-added products.*

**Actions**

- 5.4.1 Hire a contractor to identify potential value-added products for the cooperative.
- 5.4.2 Assess feasibility of producing identified products at existing locations and expanding the operation to additional sites.
- 5.4.3 Conduct a study to determine the best marketing strategy of locally grown, green certified, and value added products.
- 5.4.4 Provide the results of these studies to the MWC, DEM, and EOE.

## Chapter 5 – Action Matrix

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 1:</b> Improve Water Quality Throughout Entire Watershed	Identify, Assess, and quantify point and nonpoint source pollution in the headwaters region of the South Branch of the Hoosic River	
	Craft a mitigation strategy and site-specific plans to mitigate pollution sources in the headwaters of the South Branch	
	Implement a wetlands assessment in the headwaters of the South Branch of the Hoosic River with the intent of restoring wetland hydrology functions	Update the Lake Management Plan for the North Basin
		Create Lake Management Plans for the other areas of the lake
		Evaluate the capacity and suitability of culverts between basins
		Measure and evaluate the degree of erosion and pollution from tributaries in all three basins
		Evaluate the type and effects of the vegetation in the mid and lower basins with special attention paid to control of invasive species
		Collect additional information with regards to control of Eurasian water milfoil <ul style="list-style-type: none"> <li>▪ Identify the source of chloride to determine the significance of septic seepage</li> <li>▪ Determine the sources and sinks of phosphorous present, including both surface and groundwater</li> </ul>

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 1:</b> Improve Water Quality Throughout Entire Watershed	Implement a wetlands assessment in the headwaters of the South Branch of the Hoosic River with the intent of restoring wetland hydrology functions	Study the effects of herbicide treatment on habitat
		Evaluate the condition of the Cheshire Reservoir Dam. Attention should also be directed to issues of water volume below the dam, especially as it relates to reports of flooding
		Examine the effects of the Ashuwillticook Trail on lake management
		Augment the Adams flood control efforts to incorporate trout habitat and include an assessment of a vegetated buffer on the riverbank from Adams to the Headwaters
		Monitor Cheshire Lake water quality and identify remaining point sources of pollutants
	Support and participate in the LAPA West lake monitoring and stewardship project and Annual Water Resources Symposium	Provide direct assistance to volunteer monitors to develop lake-specific water quality monitoring programs
		Provide training to regional water quality monitoring groups; assist local groups in conducting monitoring
		Expand an existing program for shared use of water quality monitoring equipment.
		Develop a comprehensive method to compile and disseminate water quality monitoring data

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 1: Improve Water Quality Throughout Entire Watershed</b>	Conduct a watershed water quality assessment and develop a water quality improvement plan for the Mausert's Pond subwatershed	Collect and review the existing water quality data record
		Develop a lake and watershed study design and a Quality Assurance Program Plan
		Implement a monitoring program on select tributary and in-lake locations
		Organize, train, and utilize a Volunteer Survey Team and conduct a shoreline, tributary, and watershed survey to identify sources and causes of pollutant loadings
		Prepare a report of findings and recommendations
		Prepare a basic management plan to identify, maintain, and monitor achievable water quality
	Attain fishable/ swimmable water quality status in the Massachusetts portion of the Hoosic River by continuing to prioritize, assess, and work to improve impaired water bodies identified on the DEP 303d list or through other creditable sources	Continue to develop Quality Assurance Project Plans (QAPP) for all anticipated water quality data collection and monitoring
		Continue the development the long-term sustainability of volunteer monitoring in the watershed
		Develop a local working relationship with "mandatory" (government-regulated) water quality data gatherers for the purposes of comparing and supporting data collection efforts
		Support the coordination of the water quality studies produced by the DEM, the Department of Public Health, and the Department of Fish and Wildlife

<b>GOAL</b>	<b>OBJECTIVE</b>	<b>ACTION STRATEGY</b>
<b>Goal 1: Improve Water Quality Throughout Entire Watershed</b>	Attain fishable/ swimmable water quality status in the Massachusetts portion of the Hoosic River by continuing to prioritize, assess, and work to improve impaired water bodies identified on the DEP 303d list or through other creditable sources	Establish continuous "local" laboratory resources for water quality sample analysis
	Implement stormwater mitigation projects throughout watershed, with a particular emphasis on collaboration with municipalities and businesses	Implement EPA Phase II Stormwater Regulations as applicable
		Conduct specific, place-based stormwater assessment toward the development of mitigation project design and implementation
		Implement the recommendations contained in the Stormwater Assessment of the Hoosic and Housatonic Watersheds prepared by the Berkshire Regional Planning Commission
<b>Goal 2: Restore and Improve Wildlife Habitat and the Rivers Physical Functions</b>	Fully assess the alternatives of restoring the natural river functions (geomorphology) in the South Branch of the Hoosic River in the Town of Adams, while maintaining adequate flood storage and discharge capacity to protect and ensure public safety and property	
	Implement the most viable restoration alternative(s) to maximize achievement of all the restoration objectives, including habitat improvement, mitigating thermal degradation, and improving visual and physical access to the riparian corridor	Assist the New York Army Corps of Engineers' exploration of alternative bioengineering modifications or the creation of an additional channel

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 2:</b> Restore and Improve Wildlife Habitat and the Rivers Physical Functions	Implement the most viable restoration alternative(s) to maximize achievement of all the restoration objectives, including habitat improvement, mitigating thermal degradation, and improving visual and physical access to the riparian corridor	Support and assist in the formation of the Preliminary Management Plan (PMP) and the Environmental Restoration Report and the development of study designs through funding and in-kind support
		Conduct preliminary public outreach to allay community hesitations and fears regarding the alteration of flood control measures and enhance support for the project
		Implement a hydrological study of the flows in the headwaters region of the South Branch of the Hoosic River
	Assess and mitigate sedimentation and water quality issues of the North Branch of the Hoosic River as identified in the DEP's 303d list	
	Investigate possible dam removal projects on all river segments for the purposes of restoring natural river functions (geomorphology) to the extent practicable	
	Research status of stressed habitats from reduced flows related to surface water supplies and water withdrawals	
	Initiate and support enhancement opportunities for wildlife, wetlands, and biodiversity	
	Develop a fisheries management plan for the Hoosic River for the purposes of improving both sport fishing and fish consumption opportunities	Coordinate fish population surveys with the DEP Water Quality Monitors and Volunteer Monitors in the Hudson Watershed

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 2:</b> Restore and Improve Wildlife Habitat and the Rivers Physical Functions	Develop a fisheries management plan for the Hoosic River for the purposes of improving both sport fishing and fish consumption opportunities	Continue fish population surveys of approximately twenty sites on rivers, streams and ponds throughout the watershed
		Expand survey areas from previous years to include at least five additional ponds and larger river segments
		Purchase specialized equipment to increase surveying ability of the WWD of the DFWLE within the watershed
		Further process new and cataloged data for dissemination at watershed conferences and to the general public
<b>Goal 3:</b> Preserve and Augment a Network of Open Space	Support the development of a recreational railtrail/bikeway throughout the Hoosic Watershed	Support the development of a 10.5 mile Ashuwillticook Rail Trail. The project calls for site preparation for the entire 10.5 miles of the trail, along an abandoned railroad right-of-way, along with paving the southern half of the bike path from the Pittsfield/Lanesborough line to Cheshire
	Explore the creation and/or improvement of open space and appropriate recreational trail links between adjacent municipalities and the Mount Greylock Reservation	
	Implement National Park Service study ("Rivers and Trails Conservation Assistance Program") in Adams	
	Support open space plan development on a municipal as well as watershed level	



GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 4:</b> Build a Sense of Stewardship and Watershed Literacy throughout the Watershed	Work regionally to develop environmental educators' network	Promote and support applications by teachers for EOEA Outdoor Education Classroom Grants
		Work with non-profit groups like Massachusetts Audubon Society, the Nature Conservancy, and the Massachusetts chapter of the Appalachian Trail Conference to seek funding to establish an environmental education curriculum to be distributed to the all the elementary schools in the region
		Establish connections with local secondary schools and colleges to serve as support in service-learning projects such as watershed clean-up days, stream-team organization
	Implement a community-wide information and outreach program for the thermal mitigation/river restoration project in Adams.	Develop a 10-minute PowerPoint slide show and presentation and make available to community groups
		Develop an informal brochure describing the techniques and the consequences of each action and distribute to local organizations
		Incorporate river ecology and restoration efforts into elementary environmental education curriculum
	Provide technical assistance through the continued implementation of Nonpoint Source Pollution Education for Municipal Officials (NEMO) to specialized decision-making groups in the watershed	Develop high quality computer-generated slide and GIS presentations and fact sheets aimed at municipal officials and local decision makers

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 4:</b> Build a Sense of Stewardship and Watershed Literacy throughout the Watershed	Provide technical assistance through the continued implementation of Nonpoint Source Pollution Education for Municipal Officials (NEMO) to specialized decision-making groups in the watershed	Conduct at least one outreach meeting per community to encourage long-term decision making and environmental goal setting
		Deliver follow-up presentations, tailored to the specific needs of individual communities, to at least two communities, not to exceed 5 additional presentations
		Assist each community in determining the options that best facilitate improving water quality. This may include GIS services, review of current by-laws, review of land-use practices in the municipality, recommendations for stormwater best management practices
		Direct technical assistance to individual municipal boards to implement planning tools compatible with the options available
		Develop and apply municipal environmental evaluations. This may include number of boards receiving and responding to NEMO presentations, and an assessment of actions taken in response to the presentations; adoption of planning tools or strategies by contacted municipalities
		Build the capacity of town officials and help them make decisions that mitigate the environmental impact of municipal planning and development

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 4:</b> Build a Sense of Stewardship and Watershed Literacy throughout the Watershed	Provide technical assistance through the continued implementation of Nonpoint Source Pollution Education for Municipal Officials (NEMO) to specialized decision-making groups in the watershed	Engage local colleges and environmental interests in concert with NEMO objectives.
	Support a sustainable water quality volunteer monitoring program through the creation of stream teams and lake survey teams	Develop and implement a plan for appropriate watershed and water resources roadside and trailside signage
		Expanding on the 2002 DEP and Volunteer data collection, train volunteer monitors and target hot spots and areas of data gaps following the Quality Assurance Project Plan and Standard Operating Procedures
		Secure a local laboratory to enable volunteer groups to conduct water quality testing. Contact Williams College and MCLA and local high schools to explore partnership opportunities
		Explore funding sources such as the Riverways Adopt-a-Stream Small Grants, NOAA Community-Based Restoration Grants, and the Massachusetts Environmental Trust
	Foster regular long-term public awareness, education, and stewardship about watershed issues, challenges, and successes	

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 5:</b> Support Regional and Local Growth Management Initiatives	Support the development of the Community Development Plans through Executive Order 418 and the adoption of the Community Preservation Act	Offer support, information, and presentation assistance with communities beginning the process of adopting the Community Preservation Act
		Support Regional efforts to implement shared Conservation Agents to serve groups of municipalities in the implementation of the Wetlands Protection Act
	Advocate for watershed-based planning in the management of municipal environmental systems	
	Support the implementation of brownfields and other redevelopment projects, maximizing opportunities for “regreening” and more environmentally sound reuse	Support the initiatives of the Center for Ecological Technology’s mission and activities in providing information and services in composting, solid waste, sustainable agriculture, economic development, indoor air quality, energy and resource conservation and renewable resources
	Support efforts to enhance and strengthen the local economic base through sustainable production of value-added products	Support Regional and Municipal redevelopment and/or brownfields initiatives Hire a contractor to identify potential value-added products for the cooperative

GOAL	OBJECTIVE	ACTION STRATEGY
<b>Goal 5:</b> Support Regional and Local Growth Management Initiatives	Support efforts to enhance and strengthen the local economic base through sustainable production of value-added products	Assess feasibility of producing identified products at existing locations and expanding the operation to additional sites
		Conduct a study to determine the best marketing strategy of locally grown, green certified, and value added products
		Provide the results of these studies to the MWC, DEM, and EOEA
	Support efforts to enhance the capacity of local Boards and Commissions	

## Chapter 6 – Conclusion

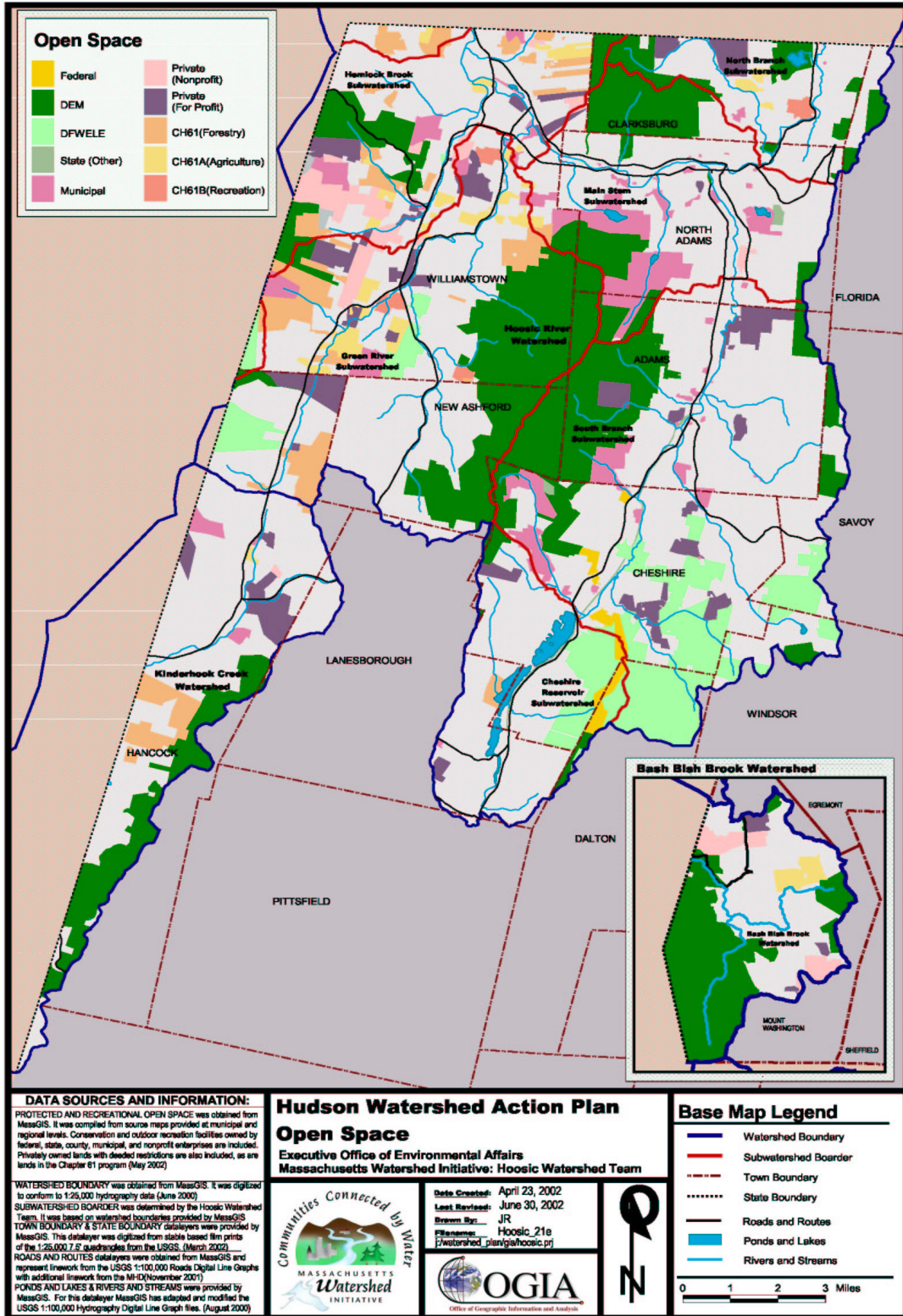
The former Hoosic Watershed Team began to implement this 5-Year Watershed Action Plan by coordinating its efforts with both the natural, fiscal/economic, political, and EOEa planning cycles. The natural cycle primarily revolves around the “water year,” with data collection, monitoring, assessment, and implementation being tied to the seasons, climate, and weather. The fiscal/economic cycles include both the state fiscal year (July 1-June 30), the federal fiscal cycle (October 1-September 30), and to some extent the business year (which tends to be more oriented to the Calendar or to specific product manufacturing and/or sales cycles). The political cycle includes turnover in administrations at the local, county or regional, state, and federal levels, each of which directly affects the team’s work, involvement of partners, availability of resources, etc. These separate but interdependent cycles and processes make the implementation of this 5-Year Plan as well as the Annual Work Plans very challenging.

To achieve what we have so far the Team has been opportunistic, creative, and persistent. These traits will need to be consistently applied by other government agencies and watershed partners, particularly as government resources diminish. More cooperative ventures must be pursued, as was done in the area of water quality monitoring between the agencies and the volunteers and as well as between the river constituents and the lake constituents. This Plan can be implemented and the goals accomplished by continuing to engage people locally and work to address environmental problems including that local perspective. Lastly, but most important to the success of this Plan, will be our ability to improve the environment while at the same time improving things economically and for people’s greater quality of life.

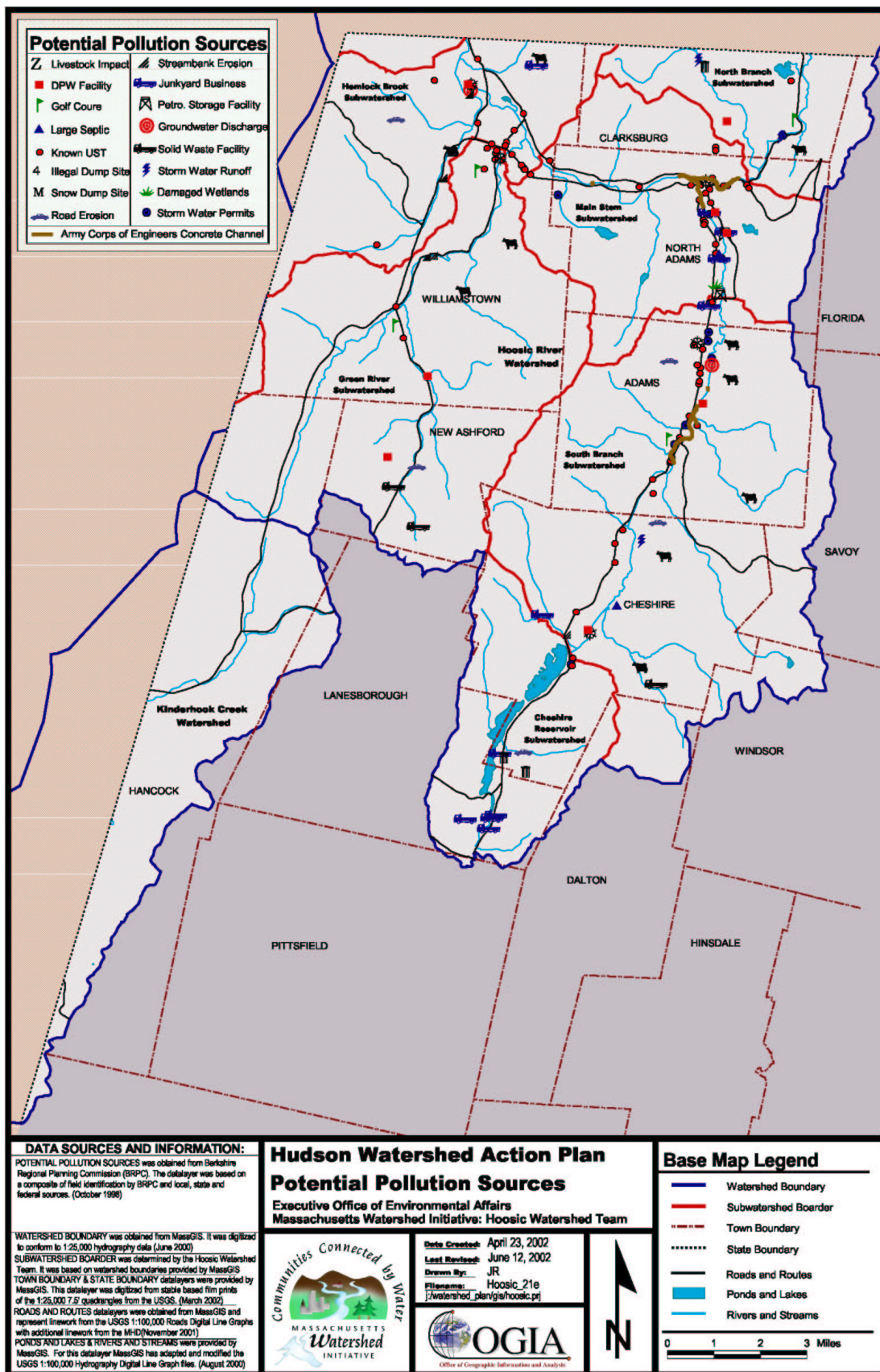
## Appendix A – Members of the former Hudson Watershed Team

Lauren Stevens, Hoosic River Watershed Association (HooRWA)	Bill Prendergast, DEP/WERO/BRP Tracey Miller, DEP/WERO Bureau of Municipal Services
Richard Schlesinger, HooRWA	Katie O'Brien, DEP Office of Watershed Management
Tom Matuszko, Berkshire Regional Planning Commission (BRPC)	Nina Danforth, Department of Environmental Management (DEM), Office of Water Resource
James Damato, Clarksburg Town Administrator (2001)	Rebecca Barnes, DEM, Division of Forests and Parks
Nancy Nylen, Center for Ecological Technology	Bruce Philbrick, . United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)
Russell Cohen, Riverways Program, Department Fisheries, Wildlife, and Environmental Law Enforcement	Jerry Schoen, Massachusetts Water Watch Partnership (WWP)
Jerry Lewis, Specialty Minerals, Inc. (deceased, 2002)	Arthur Dugas, Hoosic Lake Recreation/Preservation District
Mark Schleeweis, Department of Environmental Protection, Western Regional Office, Bureau of Resource Protection (DEP/WERO/BRP)	Andrew Schuyler, Aide to State Senator Andrea F. Nucifero, Jr.
Ed McDonald, Clarksburg Town Administrator (2002)	

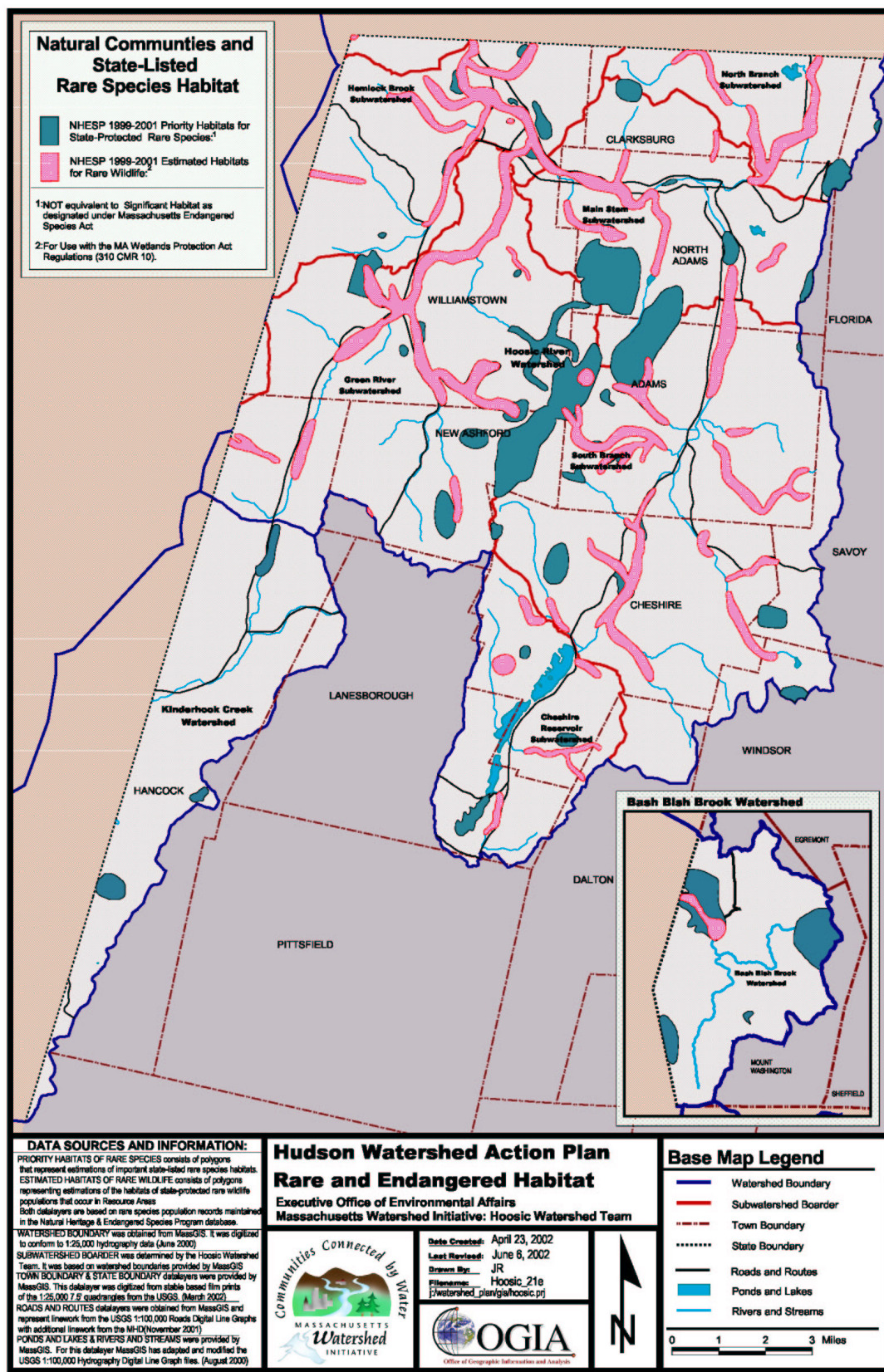
## Appendix B – Hudson Watershed Maps



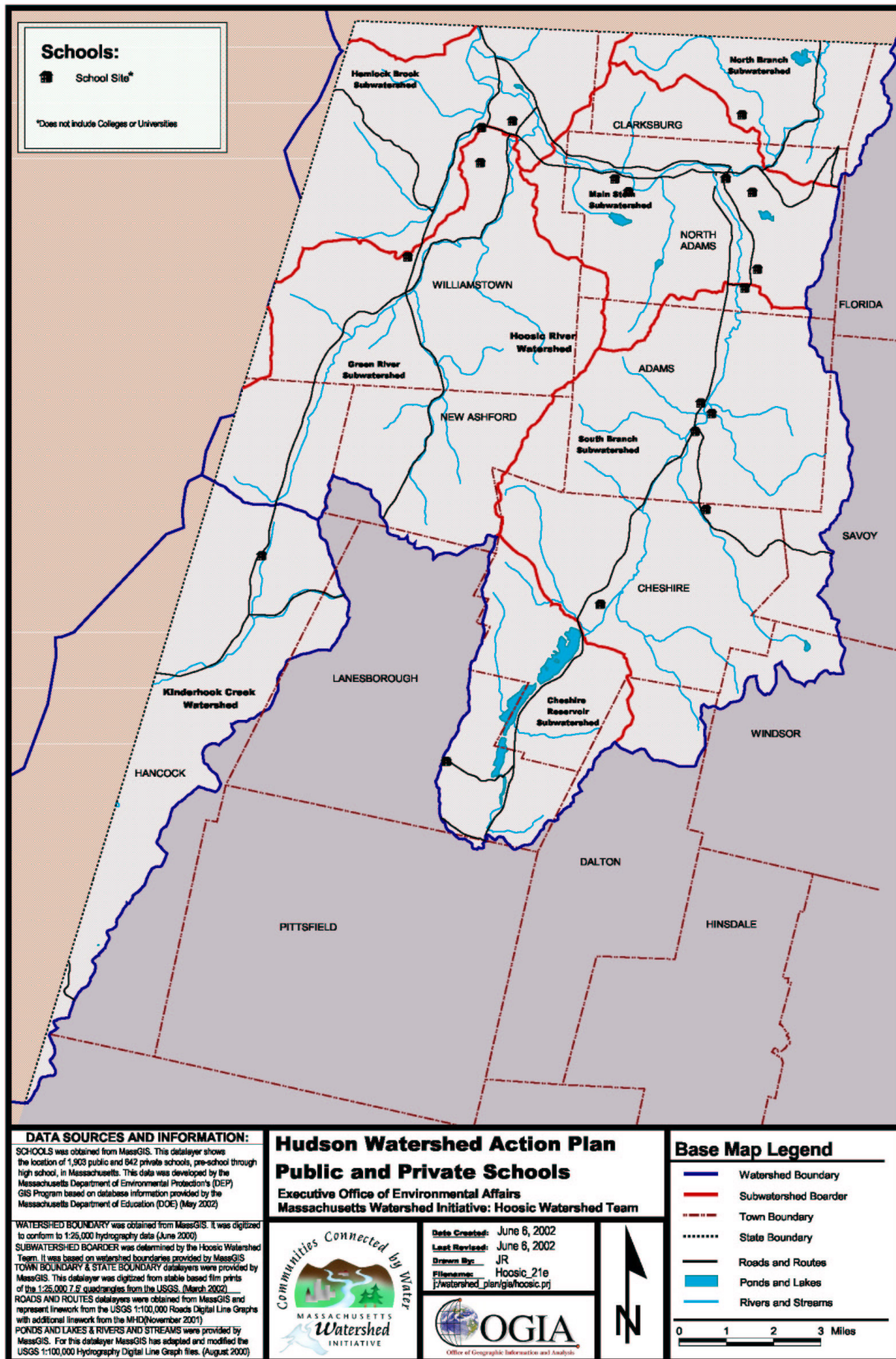




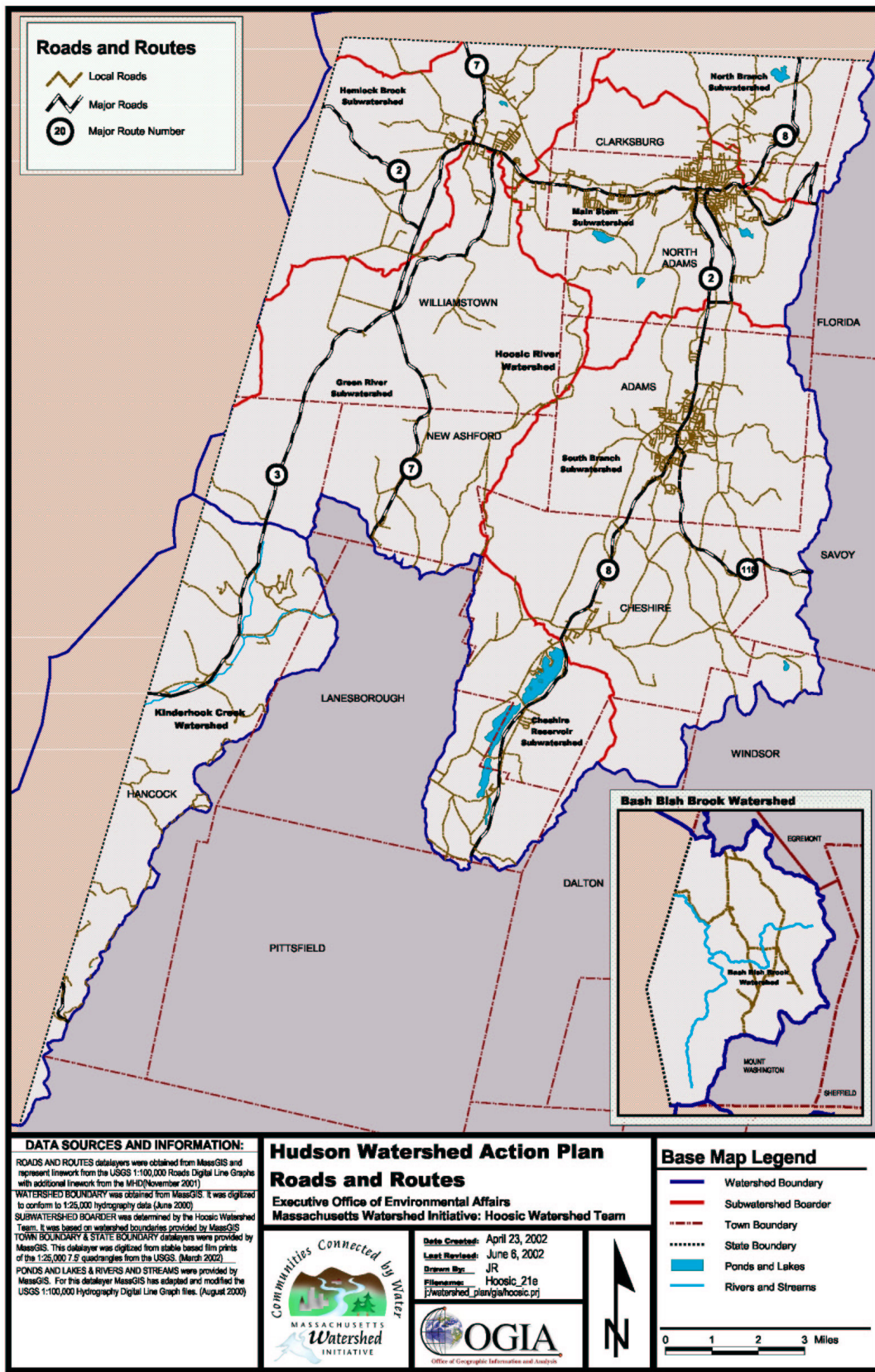




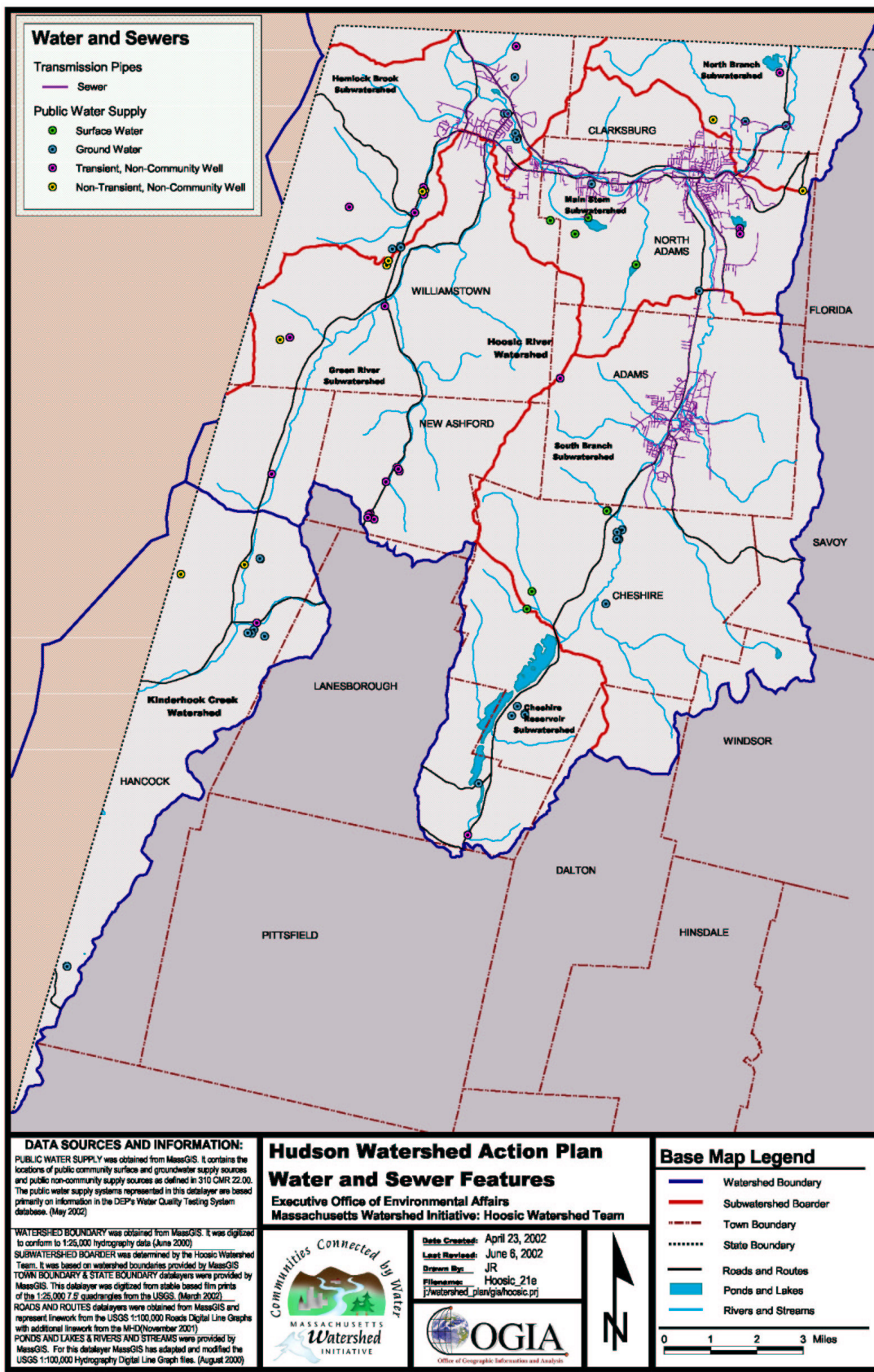




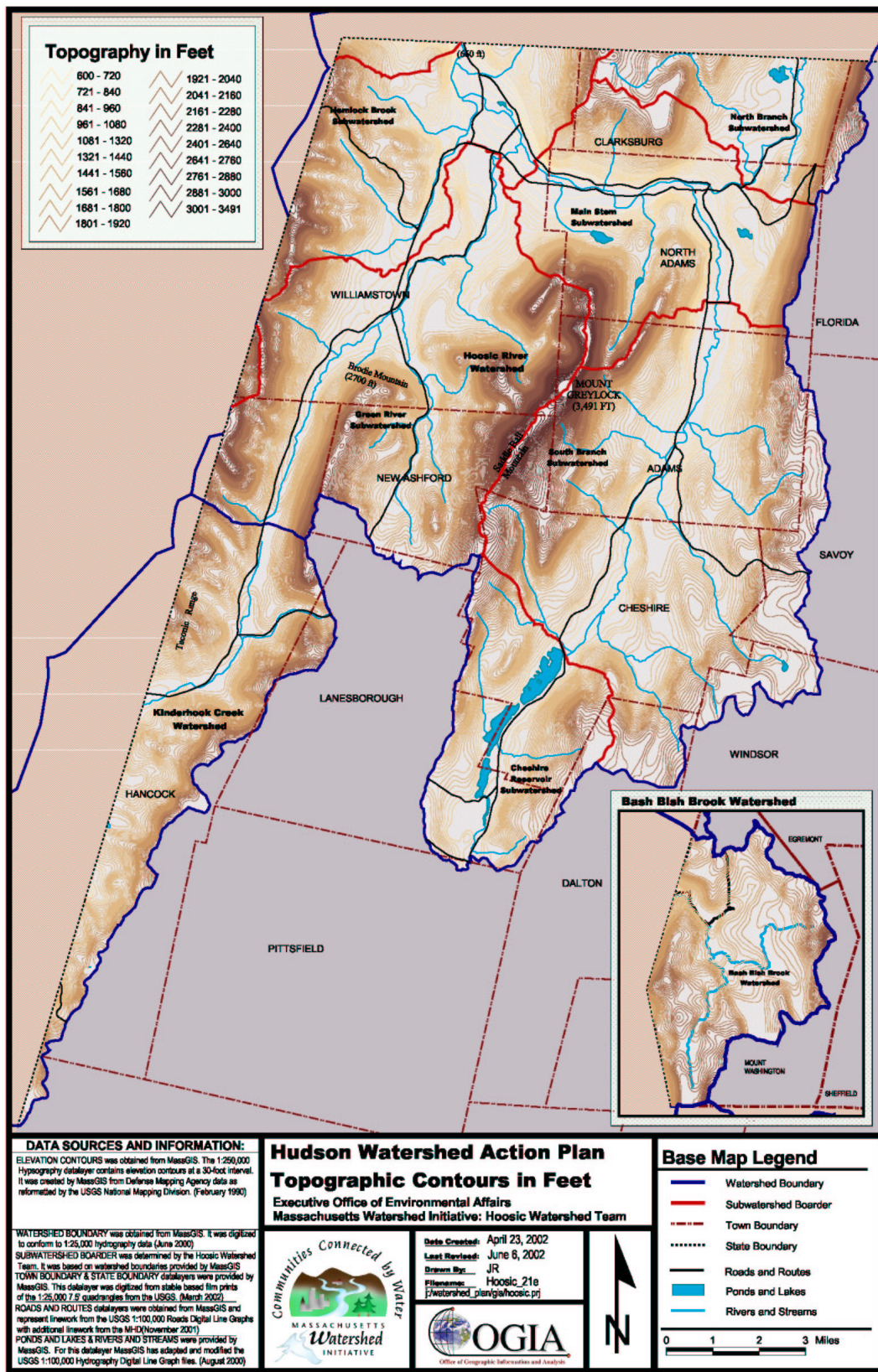




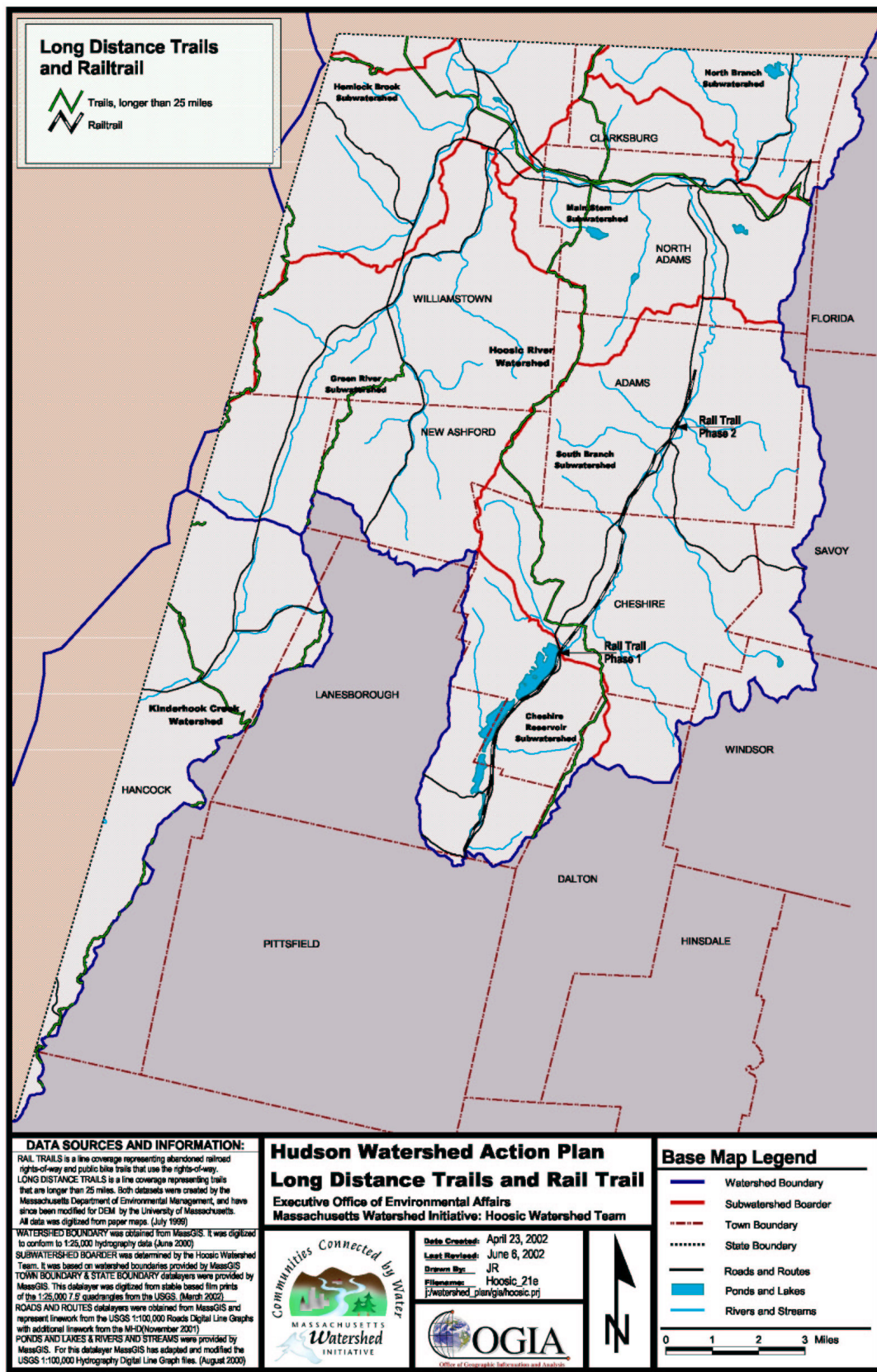




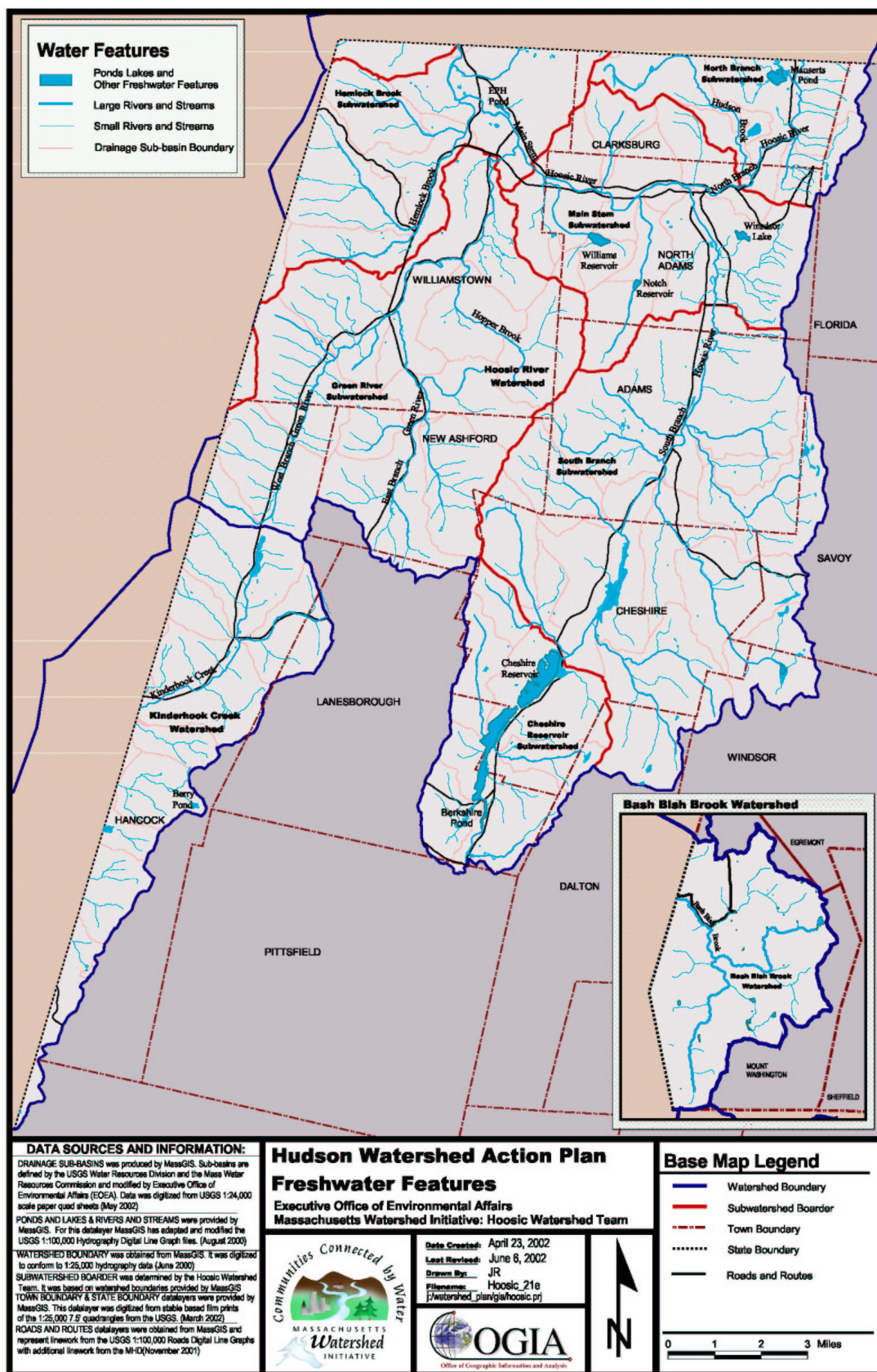




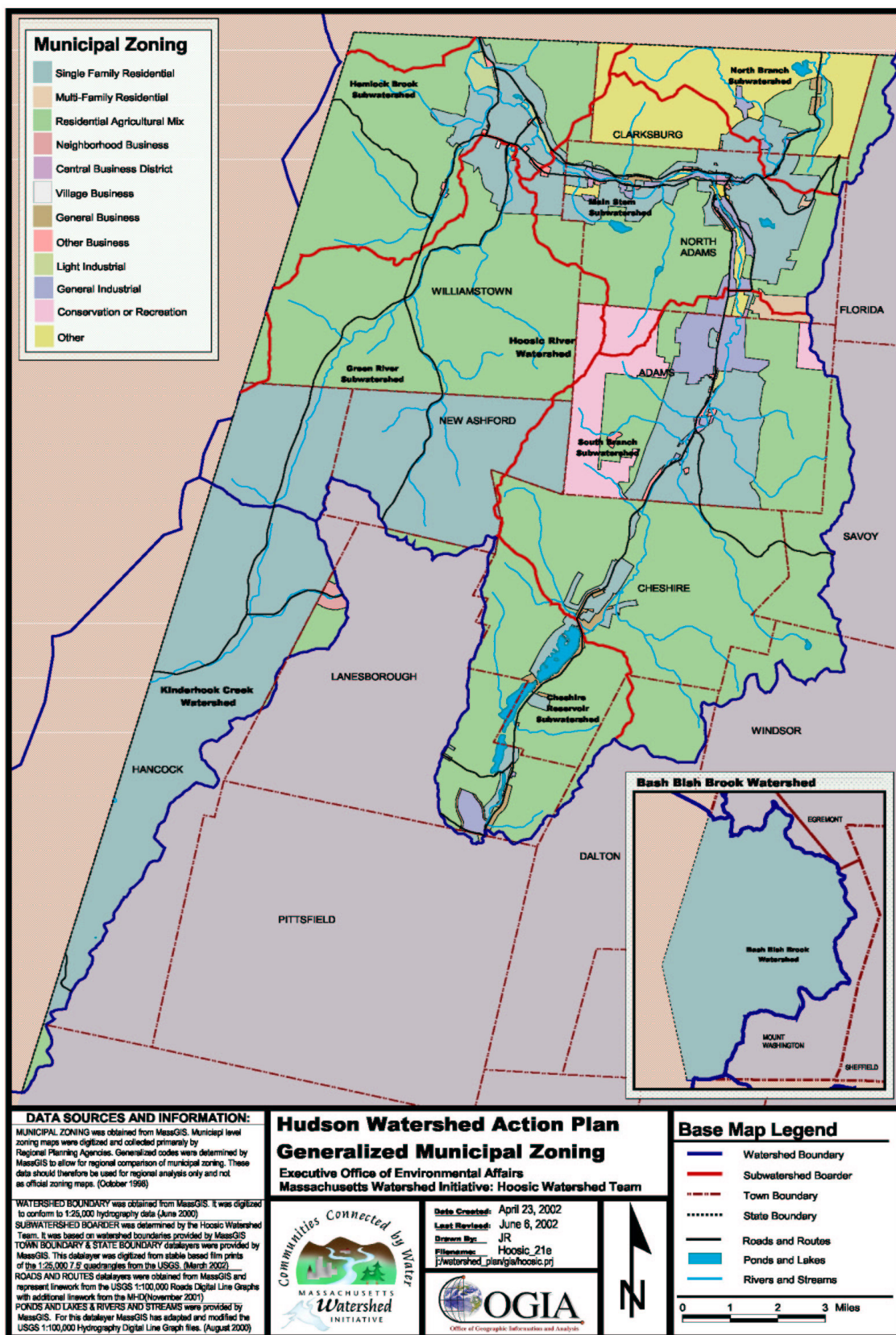




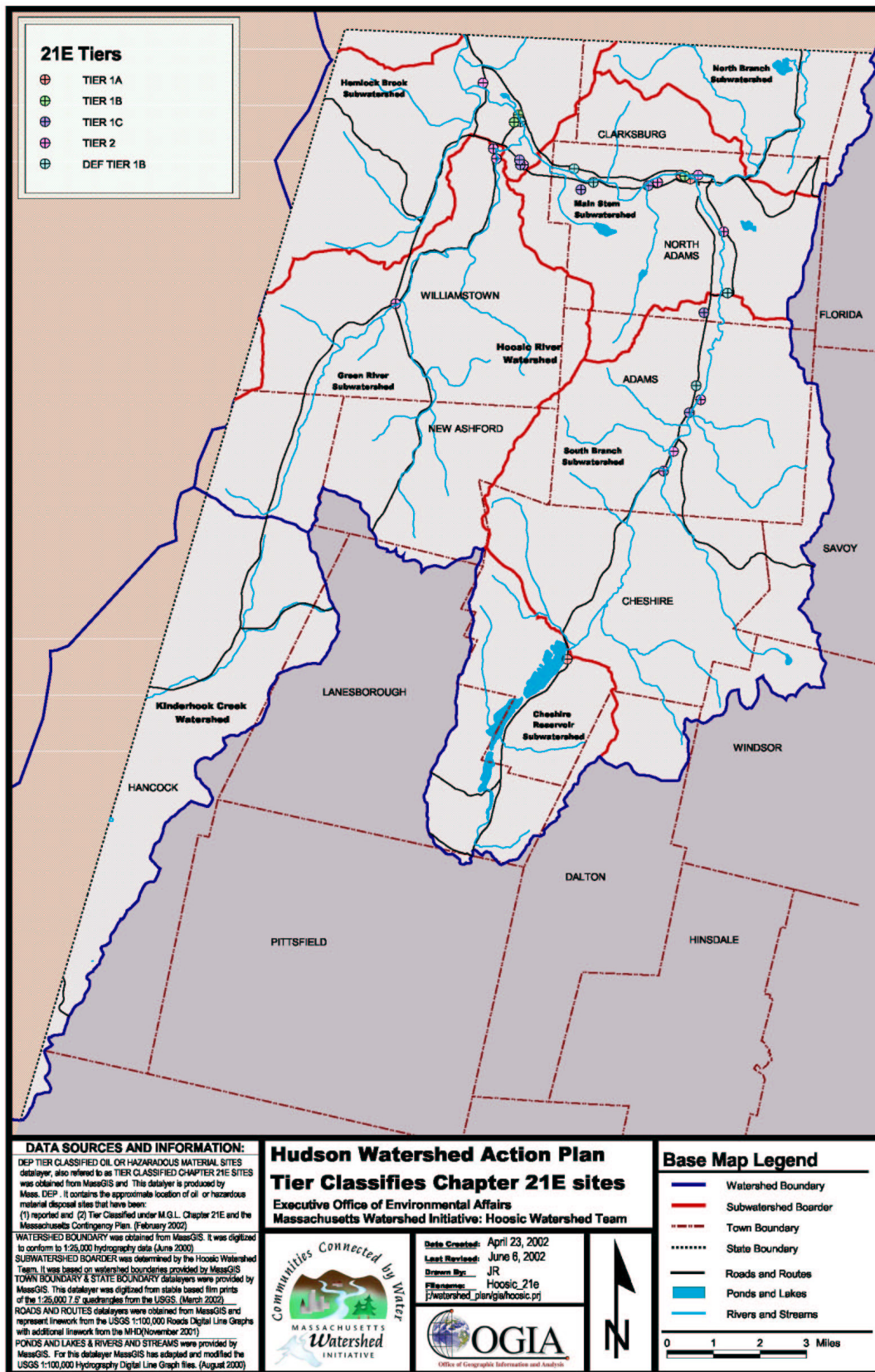




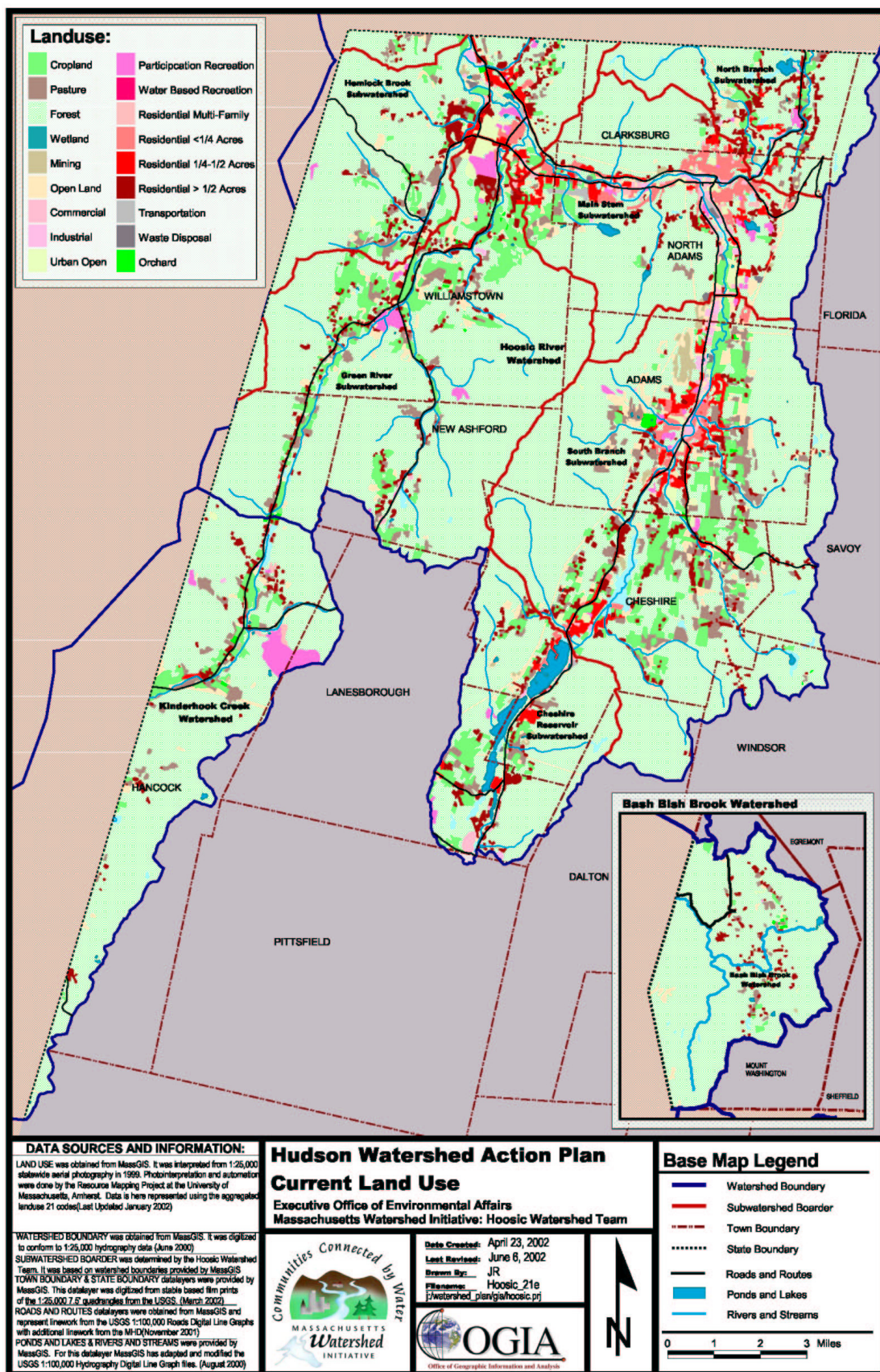














***Mitt Romney***  
*Governor*

***Kerry Healey***  
*Lt. Governor*

***Ellen Roy Herzfelder***  
*Secretary*

***Executive Office of Environmental Affairs***  
***251 Causeway Street, Suite 900***  
***Boston, MA 02114***

***(617) 626-1000***  
***[www.state.ma.us/envir](http://www.state.ma.us/envir)***